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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/897,571	07/02/2001	Hiroichi Ishikawa	450100-03330	9687
20999	7590	01/26/2005	EXAMINER	
FROMMER LAWRENCE & HAUG 745 FIFTH AVENUE- 10TH FL. NEW YORK, NY 10151			THOMPSON, TIMOTHY J	
			ART UNIT	PAPER NUMBER
			2873	
DATE MAILED: 01/26/2005				

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/897,571

Applicant(s)

ISHIKAWA, HIROICHI

Examiner

Timothy J Thompson

Art Unit

2873

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-26 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 26 is/are allowed.
- 6) ☒ Claim(s) 1, 2, 4, 5, 7 and 23-25 is/are rejected.
- 7) ☒ Claim(s) 3, 6 and 8-22 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 07/2004.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

Art Unit: 2873

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 2, 4, 5, 7, 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Goossen(U.S. Pat. No. 5,825,528).

Regarding claim 1, 5, Goossen discloses a substrate(fig 4, 10), a gap portion having a changeable size capable of causing an optical interference phenomenon(fig 4, 20); and a second layer. Goossen does not disclose a light-absorbing first layer although he does disclose that the substrate is light absorbing(col 3, lines 54-57). It would have been obvious to one having ordinary skill in the art at the time the invention was made to add a light-absorbing first layer to the substrate, since the examiner takes Official Notice of the equivalence of an opaque substrate and a substrate with a light absorbing layer placed over it for their use in the optical modulators and the selection of any of these known equivalents to absorb light would be within the level of ordinary skill in the art.

Regarding claim 2, Goossen discloses the first layer(equivalent to the substrate), the gap portion, and the second layer are stacked in accordance with this order on the substrate(fig 1).

Regarding claim 4, Goossen discloses the second layer is transparent(fig 4, 16).

Art Unit: 2873

Regarding claim 7, 25, Goossen discloses a substrate(fig 4, 10), a gap portion having a changeable size capable of causing an optical interference phenomenon(fig 4, 20); and a second layer. Goossen does not disclose a light-absorbing first layer although he does disclose that the substrate is light absorbing(col 3, lines 54-57); driving means for changing an optical size of the gap portion(col 3, lines 35-50). It would have been obvious to one having ordinary skill in the art at the time the invention was made to add a light-absorbing first layer to the substrate, since the examiner takes Official Notice of the equivalence of an opaque substrate and a substrate with a light absorbing layer placed over it for their use in the optical modulators and the selection of any of these known equivalents to absorb light would be within the level of ordinary skill in the art.

Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ueda et al. (U.S. Pat. No. 6,580,481).

Regarding claim 23, Ueda et al. discloses; a substrate(fig 23, 11); a light-absorbing first layer formed in contact with the substrate(fig 23, 14); a second layer formed in contact with a face of the first layer, on the side opposite to the substrate(fig 23, 16).

***Claim Rejections - 35 USC § 103***

Art Unit: 2873

Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ueda et al. as applied to claim 23 above, and further in view of Goossen(U.S. Pat. No. 5,825,528).

Regarding claim 24, Ueda et al. does not disclose substrate is a substrate which does not transmit light. In fact Ueda et al. does not disclose if the substrate is light absorbing or transparent. However, Goossen discloses the the substrate is light absorbing(col 3, lines 54-57). It would have been obvious to one having ordinary skill in the art at the time the invention was made to use a light absorbing substrate as shown by Goossen, in the optical device of Ueda et al., since as shown by Goossen light absorbing substrate are commonly used in optical devices so as to stop light from passing through the device.

### ***Allowable Subject Matter***

Claims 3, 6, 8-22 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claim 26 is allowed.

The following is an examiner's statement of reasons for allowance: The prior art taken either singularity or in combination fails to anticipate or fairly suggest the

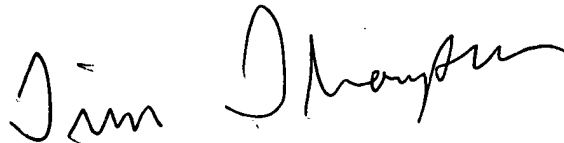
Art Unit: 2873

limitations of the independent claim, in such a manner that a rejection under 35 U.S.C. 102 or 103 would be proper. The prior art fails to teach a combination of all the claimed features as presented in independent claim 26, with the allowable features being displaying a two dimensional image by irradiating a plurality of optical one-dimensionally or two-dimensionally with light. Therefore claim 26 is allowed.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Timothy J. Thompson whose telephone number is (571) 272-2342. If the examiner can not be reached his supervisor, Georgia Epps, can be reached on (571) 272-2328.

A handwritten signature in black ink, appearing to read "Tim Thompson", is written over the printed name and title.

T.J.T.

1/24/05

**TIMOTHY THOMPSON  
PRIMARY EXAMINER**